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Paper March 6th 1827
W. E. H.

An
Inaugural Dissertation
on
Trachitis by

Charles H. Matthews
of
Pennsylvania. —

Apr. 18 1877
No. 2.

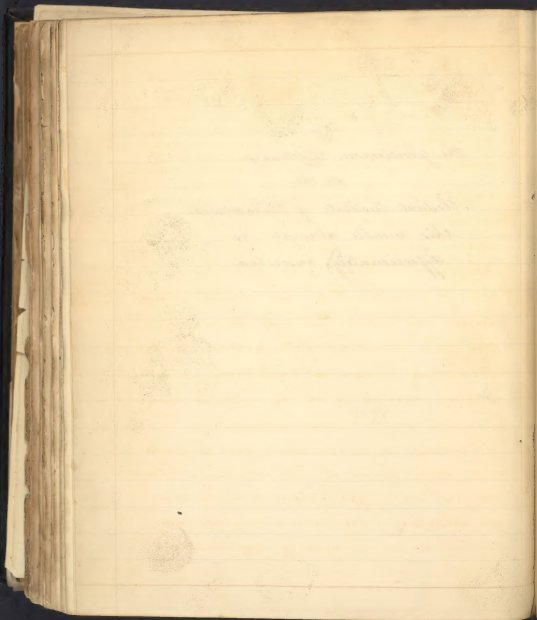
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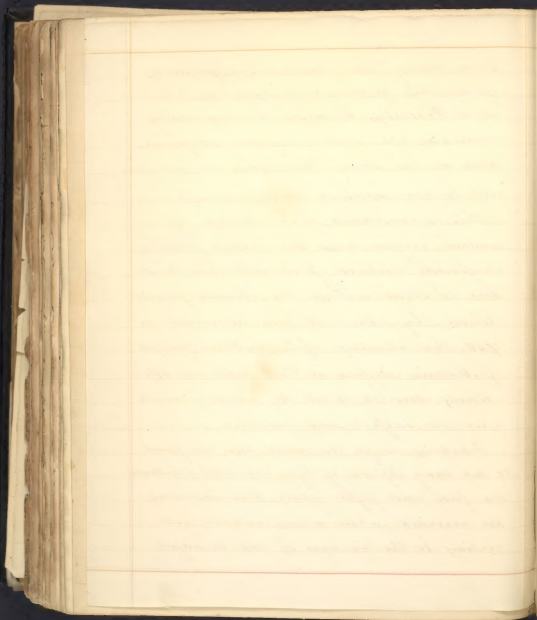
To
The Gentlemen Lecturers
in the
Medical Institute of Philadelphia
this humble attempt is
affectionately inscribed



From among the numerous appellations given this disease, I have selected the term *Trachitis*, because it very clearly indicates the nature of the complaint, and at the same time gives an uniformity to the medical nomenclature.

This is considered as a disease of modern origin, and the credit of having originally noticed and described it is due to Martin Rijl an obscure practitioner, by whom it was discovered in 1749; the attention of Doctor Home professor of Materia Medica at Edinburgh was afterwards directed to it; by whom a work upon the subject was published.

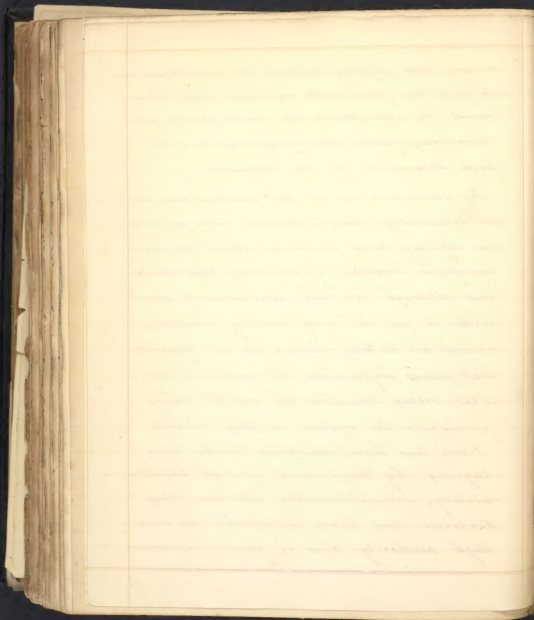
Trachitis is for the most part confined to an early period of life, occurring between the first and fifth years, but instances are recorded where adult subjects fell victims to the ravages of this dreadful



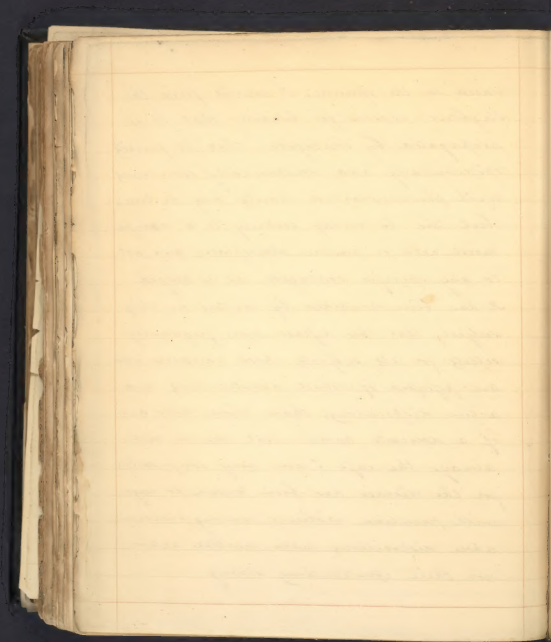
disease, and infants within the month suffered from this formidable malady; these however must be considered as anomalous deviations from the ordinary course and character of the disease.

Its occurrence is at all seasons and in all situations, but I believe more frequently in spring and autumn, than the more uniform seasons of summer and winter; and although we not uncommonly meet with it in the most healthy locations, almost all authors concur in the opinion, that places influenced by proximity to lakes, rivers, marshes the sea &c. may predispose the system to this disease.

Cramp has been considered to be contagious by Physicians of high respectability; notwithstanding however this doctrine has been supported by such high authority, and so much confidence



placed in the opinion, I cannot find the slightest reasons for believing that it is propagated by contagion; that it prevails epidemically and endemically sometimes with circumscribed limits may be true; but this is owing entirely to a damp, moist, cold or austere atmosphere, and not to any specific contagion as is alleged. It has been remarked by writers on this subject, that this disease more frequently selects for its subjects those children who are possessed of robust constitutions and active dispositions; than those who are of a delicate habit: that this is not always the case I am very confident; for the disease has been known to rage with peculiar violence, among children whose dispositions were neither active, nor their constitutions strong.



Neurological writing have divided Trachitis
into Spasmodic and Inflammatory: the
first is considered an affection of the muscles
of the larynx: the second a state of fever
with a local inflammation of the trachea.
In the first, the symptoms come on suddenly
in a very alarming manner, usually later-
about generally in the night whilst the
child is sleeping, attended with great
difficulty of breathing together with a sense
of suffocation, and without any other
symptoms, there are intermissions for a
considerable length of time in this species,
and then the distress returns with as much
violence as at first: it appears to me, that
in all cases of croup when it is sudden
in its appearance, it must venture of this
character, the early symptoms agree with
this view of Pathology, and decisive



confirm its correctness, and what still
further argues much in favour of the
opinion of the affection being so readily
removed by antispasmodic remedies, if
the disease depended at all times on
inflammation it would be impossible
for these medicines so promptly and
so completely to afford relief.

In the second or inflammatory species
at first the symptoms are slight, sometimes
have attending a common catarrh: in
some instances the dyspnoea comes on so
slowly that the parent complains of
some difficulty of breathing, for several
days before he is seriously ill, if a child
he is drowsy, inactive, and fretful, at
length there is a hoarseness, attended
with a dry cough, and difficulty of
breathing, as soon as the difficulty of



breathing is considerable, the pulse becomes frequent, strong and hard; the voice has a peculiar ringing sound which has been compared to the crowing of a cock, the barking of a small dog, or the noise issuing from a blown tube. The eyes are dull and the face flushed; as the disease advances the symptoms mentioned increase in violence, the state of breathing becomes such, "that the shoulders are raised at each inspiration, the abdominal muscles act strongly, and at the same time there is a violent alternate elevation and depression of the ribs and scapulae". It perhaps may not be improper for me now to remark that this stage of the complaint has been called "Bound Ribs", from the circumstance of the abdominal muscles



being so violently affected the system becomes exhausted, the pulse small and quick, the extremities cold, and the final stage soon arrives, accompanied sometimes with convulsions, which terminate the miserable existence of the little sufferer, by a painful and premature death.

Such is the fatal conclusion frequently attending this disease, if not counteracted by the most powerful remedies; unhappily the subjects of this complaint are for the most part too young to describe

their sensations; and it is owing either to ignorance or an injudicious reliance on the 'vis medicatrix naturæ' that children curable in the former stages of croup, are left neglected by their parents and nurses, until it becomes confirmed and perhaps irremediable; thus.



"In want of timely care,
Millions have died of medicable wounds."

Appearances on Dissection on laying
open the trachea of those who die of this
disease a preternatural membrane is
sometimes found lining the whole in-
ternal surface of the upper part of
the trachea; formed either by coagulable
lymph, or inspissated mucus. This
membrane is supposed to effect its
baneful purpose, simply by filling up
the cavity of the trachea; and thus
obstructing the passage of air to the
lungs. But that the windpipe can
receive a tube much smaller than itself,
and yet be capable of admitting more air
than will pass through the rima glot-
tidis; must be evident to any one
who will closely inspect a preparation
of it. From this circumstance alone



there, I conclude that this preterminal membrane, is never the immediate cause of death; but that it merely acts as an extraneous substance in the trachea; covering the muscles into spasmodic contraction, and inducing suffocation. From the post mortem appearances and the symptoms which attend the disease, there can be no doubt, but that it is spasmodic in its final stage.

Diagnosis - Trachitis may be confounded with, calam to the great danger and detriment of the patient; for frequently whilst the unwary mother is nursing her tender offspring (for what she deems a slight cold) the distressing period is at hand, when medical aid can be no longer serviceable; and the child falls a sacrifice to this disease - they may be distinguished



however by the sound of the voice in croup,
and by the absence of sneezing, and deflu-
ions from the eyes, after the disease has
continued some time, there can remain
no difficulty whatever. It may be known
from whooping-cough, from the circumstance
of there being no stridulous sound of the
voice, no dyspnoea in the intermissions of
coughing, and from this last being con-
tagious. one of the chief diagnostic symptoms
of Trachitis is, that however great the affliction
of the larynx may be, the deglutition is
free. It has long been a maxim in
medicine, even before there were any
distinct ideas respecting this complaint,
that that species of cymanche in which
the respiration is impeded, without any
redness or swelling appearing in the
fauces, is most to be dreaded.



'Gravis et illa species anginae, (Horsdingle's) cum gutturi interni muscoli sic inflammantur, ut neque in facibus neque in cervice, quidpiam adpareat, unde Galeno merito pestiferus, Galeno morbus extreme peracutus, Hippocrate vero lethalis dicitur" Croup may be distinguished from acute asthma because in the former there is seldom any semipneumonia, whereas in the latter it is one of the most striking phenomena of the disease.

Prognosis. - As appearances are often fallacious the physician should be cautious in pronouncing his opinion, which may involve his future reputation; the most favourable conclusion may however generally be inferred, where the febrile and other symptoms are relieved by the remedies to be hereafter mentioned. -

Method of Cure. - In croup when this



important part of our subject, it will be proper to treat of the employment of those remedies which are necessary to remove an attack of Trachitis; and the method to be pursued in obviating a recurrence, and first of Emetics. — Every one must acknowledge the superior efficacy of these, both in the commencement and more advanced stages of this disease; they act as expectorants, clear the trachea of the phlegm and mucus so troublesome in the forming stages; and when the lungs imperfectly execute their functions, in consequence of "being loaded and oppressed," the power of copious vomiting in relieving engorgement, and re-establishing a free and equal circulation, are advantageously known. The enlarged artery is most undoubtedly among the best we can use for this purpose; the certainty, extent



and permanency of its operation; together with
its expectorant properties, sufficiently recommend
it in this disease: where the emetic tartar
does not act so promptly, as is desired the
addition of Spessananka will be found useful.
Hahnemann. Experience has proved this to
be an invaluable remedy in croup. The
advantages derived from it in promoting
the operation of Emetics, are obvious.

The patient should be kept in the bath
ten or fifteen minutes. — The remedies
already mentioned have been known to
effect a cure themselves, and almost in-
variably to afford relief and moderate
the violence of the symptoms. —

Not the least of the remedies, resorted to
in this affection, is Blood letting — All
authors concur in the propriety of this
in Trachitis, and some depend entirely



upon it in the early part of the disease;
it is to be presumed however, that after
the Sackea has relieved itself by effusions
this can no longer be serviceable.

The extent to which it should be carried,
should depend upon the age of the patient,
habit of body, and more particularly upon
the state of the pulse. It has been pro-
posed in this as in similar affections,
to let blood from the jugular vein; to
which some practitioners give the preference.
In small children where it is difficult
to procure blood, owing to the smallness
of the veins, it has been recommended to
draw blood from the feet and hands, by
first placing them in warm water.
Where relief is not obtained by a judicious
use of all these, we may resort to Topi-
cal Bleeding, by Suckers or cups to the



side or back of the neck, and if after the application of these, the symptoms continue so alarming, as to require immediate attention, Professor Chapman directs bleeding "ad deliquium animi" syncope being induced the impeded respiration, consciousness, cough and fever, are most eminently considerably alleviated.

Purging - As subservient to the indication of depletion, this is of the greatest importance. Calomel in large doses will be found of infinite service, in procuring evacuations from the alimentary canal, and thereby "carrying off lingering symptoms, obviating a relapse, and confirming convalescence."...
Blisters. These are without doubt an excellent remedy; but when considered alone, under the antiphlogistic treatment, they are so far subordinate to the fore-



going, that when a sudden reduction
of excitement is required, but little de-
pendance can be placed on them.

As it is probable their utility may be
very considerable, in consequence of
the depletion they afford in the immedi-
ate vicinity of the part where ex-
citement is concentrated they should
be applied directly to the trachea. —

Expectorants. — It is in eradicating the
relucts of croup that these are of signal
utility. — Where cough, hoarseness, difficult
expectoration, and tightness of the chest
remain, the antimonials have been re-
commended but in my estimation, our
chief reliance is to be placed on the
Pisgala Vinosa and the Hive Syrup
of Profusion Love; adapted to the removal
of the sequelae of this complaint, there are



no medicines whatever more deserving
the encomiums bestowed on them; their
superior efficacy in removing the hoarse-
ness and cough, in relieving the tightness
of the chest, and in promoting expectoration,
must be acknowledged. -

Inhalations. - Breathing the vapour of
warm water impregnated with vinegar
or camphor, proves a good auxiliary in
assisting expectoration, and in lessening
the violence of the spasms. "In unanswer-
manner it acts, whether by mixing with
and diluting the thick matter, which
clogs the bronchial vessels, or as a stimulus
acting on these parts and increasing the
secretion from them, it is found to loosen
the cough, to promote expectoration, and
relieve dyspnoea."

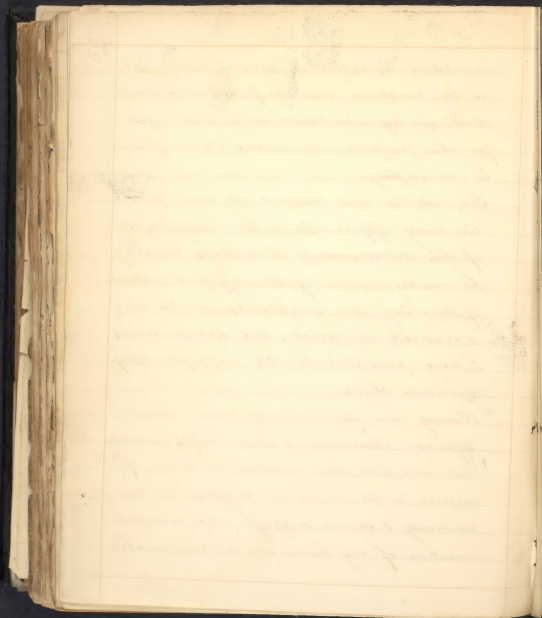
There is perhaps no other form of larynchitis,



in which inhalations are as beneficial, as in croup; a variety of substances besides those already mentioned, have been used for this purpose, an enumeration of which is unnecessary.

The practice here detailed is more particularly applicable to the early stages of this disease, many observations might be made, concerning the different methods of treating the complaint, in its more advanced condition, did not the limits I have prescribed to this imperfect essay, preclude them.

Having now finished my short and defective observations, I shall briefly conclude; but were I to close without a tribute of respect to the illustrious professors in this University, I should suppress the warmest emotion of my heart for the innumerable



2
advantages I have derived from your
public lectures and private communica-
-tions, permit me to tender my
sincere acknowledgements--

Every student who has had the good
fortune to visit this college, must be
convinced of her superior method of
imparting medical knowledge and of
the indefatigable exertions of her Pro-
-fessors in giving instruction. --

